

Weekly Report

2017.11.27-2017.12.03

1.This Week

Summarization Form

Task	Progress	Time
Waveline	Paper: revise the paper.	Submitted
Power Grid New Projects	Generate power flow data and extract needed information from the raw data of transient simulation data.	February
Power Grid Visualization Survey	Gathering materials.	
VIS 2018 paper	Idea evaluation: 1.contextual anomaly detection 2.abnormal event detection 3.propagation of fault	4.1

Wavelines

1.Revise the paper and submit it: make final revisions of the paper, video, and pictures.

Power Flow Project in Ningbo

- 1.Process with the binary-coded data file of all samples.
- 2.Generate power flow data from the program sent by Dr. Huang.
- 3.Extract needed information from the raw data, including the topological structure, bus information (bus, generator, transformer), and time series of variables.
- 4.Realize topological layout (orthogonal) and the heat map.

Idea evaluation for VIS 2018

- 1.Contextual anomaly detection and visualization. Finding anomaly in both temporal and spatial (topological neighbourhood) context can better preserve the temporal and topological features.
- 2.Abnormal event detection and visualization.

3. Anomaly propagation visualization.
4. Realize LOF and one class SVM (anomaly detection methods) as baselines.

Papers

1. Automatic outlier detection for time series: an application to sensor data
2. Online Novelty Detection on Temporal Sequences
3. A tutorial on support vector regression
4. Bayesian Surprise Attracts Human Attention
5. Conditional Anomaly Visualization
6. Surprise! Bayesian Weighting for De-Biasing Thematic Maps

2.TODO

1. other projects of power grid started.
2. VIS 2018 paper idea evaluation.